

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: LUMARK

Report Number: P195186

Luminaire Tested: **NAV-AF-06-D-UNV-SL3-7060**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195186
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24262)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-06-D-UNV-SL3-7060
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 35975 lumens
Efficiency: N/A
Efficacy: 108.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B3 - U0 - G5

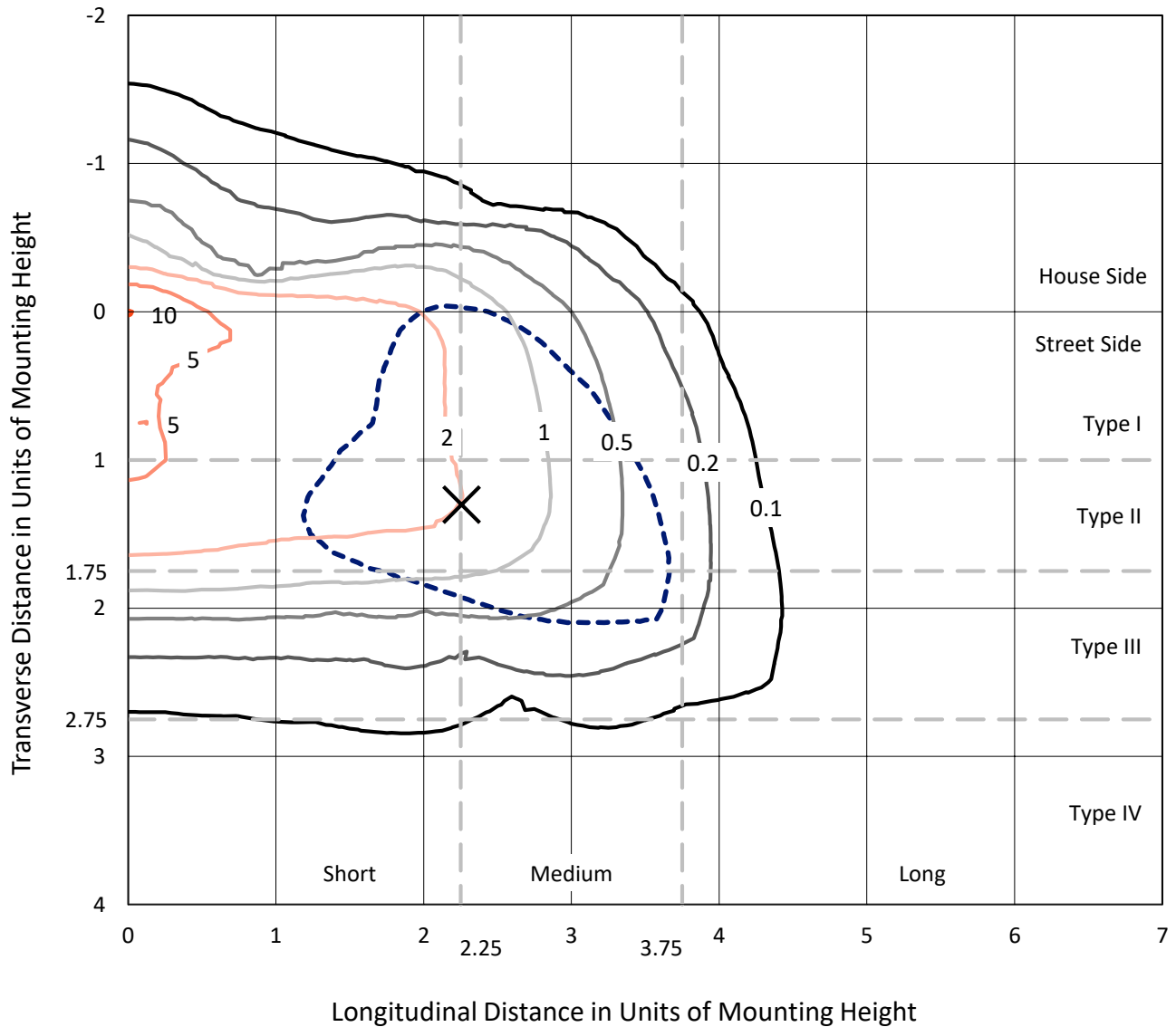
Input Watts (W): 333
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

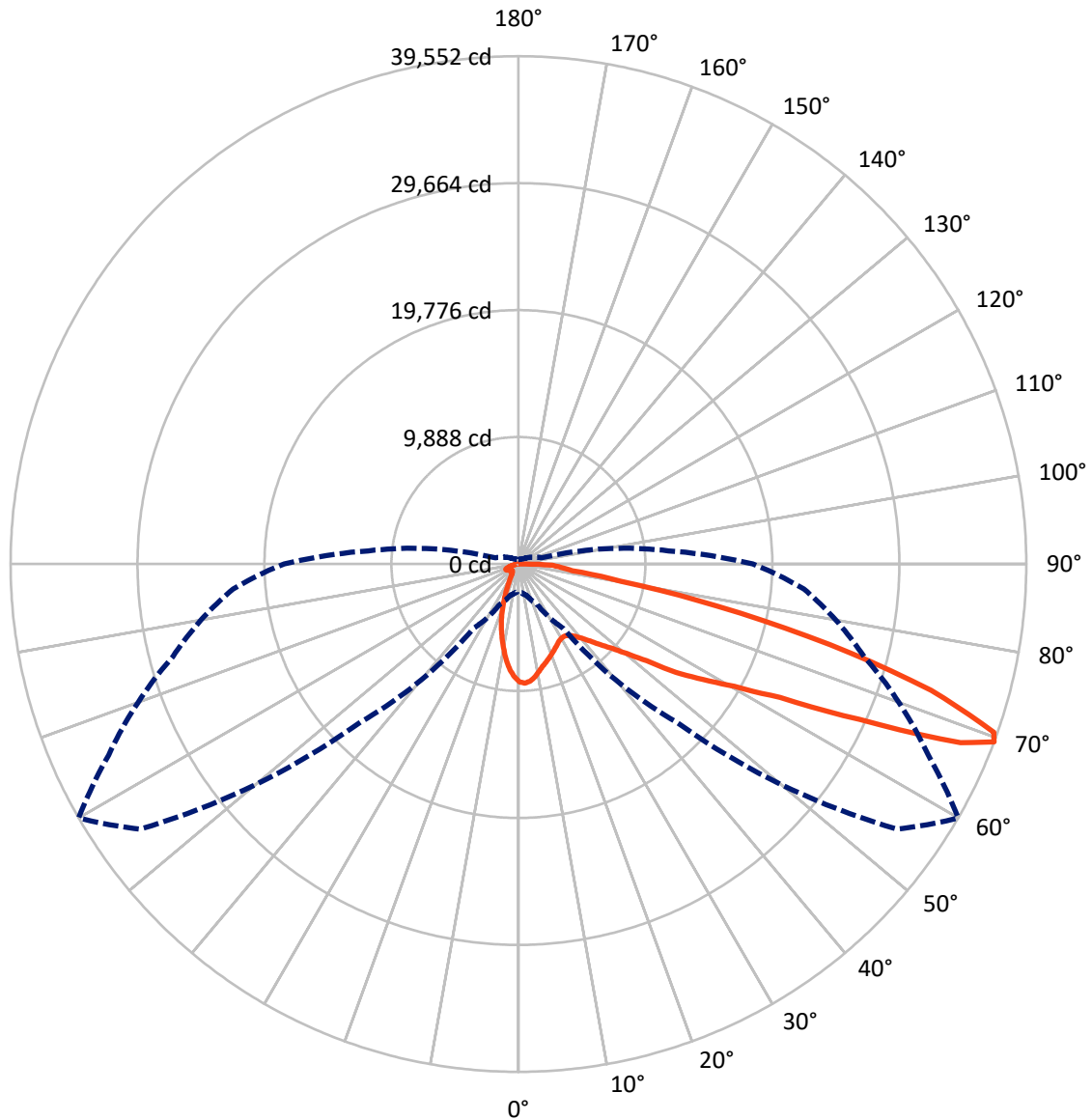
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 10.2 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5131.2	0.0	5131.2
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	30843.8	0.0	30843.8
	% Fixture	85.7	0.0	85.7
Total	Lumens	35975.0	0.0	35975.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	778.7	2.2
10°-20°	1667.3	4.6
20°-30°	2127.0	5.9
30°-40°	2926.9	8.1
40°-50°	4741.0	13.2
50°-60°	7440.8	20.7
60°-70°	9919.9	27.6
70°-80°	5517.7	15.3
80°-90°	855.8	2.4
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	35975.0	100.0
0°-180°	35975.0	100.0



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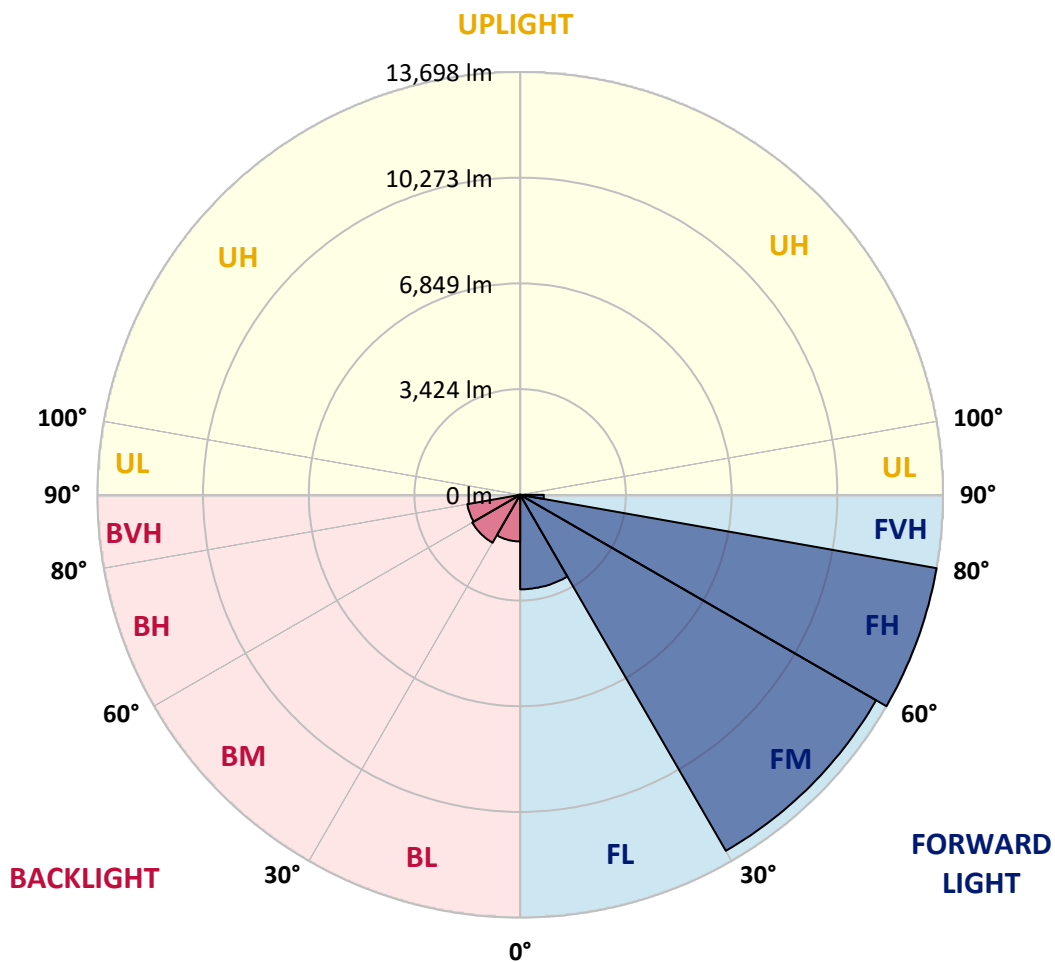
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3060.8	8.5			
FM	(30°-60°)	13316.1	37.0			
FH	(60°-80°)	13697.9	38.1			G5
FVH	(80°-90°)	769.0	2.1			G5
BL	(0°-30°)	1512.2	4.2	B3/2500		
BM	(30°-60°)	1792.6	5.0	B2/2500		
BH	(60°-80°)	1739.7	4.8	B3/2500		G3/2500
BVH	(80°-90°)	86.7	0.2			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G5

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	9179.1	9179.1	9179.1	9179.1	9179.1	9179.1	9179.1	9179.1	9179.1	9179.1	9179.1
2.5°	9423.7	9449.0	9449.0	9428.3	9416.7	9349.8	9310.6	9282.9	9234.5	9144.5	9063.8
5°	9086.9	9135.3	9156.1	9165.3	9225.3	9204.5	9206.8	9188.4	9146.8	9049.9	8918.5
7.5°	8468.6	8477.8	8514.7	8577.0	8722.4	8823.9	8906.9	8923.1	8913.8	8842.3	8657.8
10°	7859.6	7875.7	7919.6	8025.7	8164.1	8309.4	8489.4	8563.2	8618.6	8595.5	8362.5
12.5°	7354.4	7356.7	7405.1	7527.4	7682.0	7864.2	8108.7	8224.1	8355.6	8408.6	8148.0
15°	6867.6	6899.9	6946.1	7093.7	7285.2	7515.9	7797.3	7956.5	8129.5	8281.8	7981.9
17.5°	6498.5	6523.9	6551.6	6673.8	6895.3	7183.7	7532.0	7702.7	7931.1	8164.1	7811.1
20°	6295.5	6304.7	6284.0	6344.0	6530.8	6842.3	7246.0	7451.3	7723.5	8051.1	7635.8
22.5°	6254.0	6254.0	6177.9	6166.3	6249.4	6512.4	6950.7	7202.1	7534.3	7972.6	7479.0
25°	6447.8	6433.9	6290.9	6159.4	6129.4	6263.2	6669.2	6978.4	7372.8	7970.3	7361.3
27.5°	6814.6	6796.1	6618.5	6397.0	6205.5	6147.9	6452.4	6768.4	7246.0	8048.8	7301.3
30°	7271.3	7264.4	7084.5	6807.6	6491.6	6194.0	6367.0	6660.0	7160.6	8194.1	7299.0
32.5°	7771.9	7739.6	7628.9	7352.1	6941.4	6450.1	6417.8	6664.6	7137.5	8406.3	7352.1
35°	8304.8	8281.8	8254.1	7974.9	7513.6	6902.2	6641.6	6823.8	7250.6	8701.6	7502.0
37.5°	8983.0	8957.7	9003.8	8699.3	8194.1	7495.1	7019.9	7142.1	7481.3	9130.7	7781.2
40°	10189.6	10115.7	9986.5	9518.2	8987.7	8221.8	7566.6	7585.1	7875.7	9705.1	8228.7
42.5°	12171.2	11933.6	11294.6	10434.1	9825.1	9066.1	8279.4	8191.8	8420.2	10464.1	8879.2
45°	14157.4	13889.8	12810.2	11433.0	10692.5	9972.7	9160.7	8950.8	9098.4	11347.6	9716.6
47.5°	15440.0	15308.6	14090.5	12431.9	11601.4	10960.1	10168.8	9822.8	9928.9	12348.8	10750.1
50°	15816.1	15703.0	14745.7	13213.9	12459.5	12152.7	11416.8	10957.8	10976.2	13518.4	11988.9
52.5°	15534.6	15488.5	14854.1	13698.3	13248.5	13410.0	13144.7	12505.7	12353.4	14801.0	13331.5
55°	15158.6	15174.8	14930.2	14185.1	14051.3	14581.9	15405.4	14891.0	14245.1	16136.7	14729.5
57.5°	13975.2	13986.7	14628.0	15112.5	15583.1	16224.4	17165.6	16948.8	16196.7	17578.5	16295.9
60°	11253.0	11343.0	12771.0	14921.0	17334.0	19461.0	19691.7	19317.9	18272.9	19239.5	18332.9
62.5°	8039.5	8120.3	9774.3	12953.2	17128.7	23124.3	24356.2	22870.6	21089.6	21724.0	21198.1
65°	4223.9	4210.1	5490.4	8950.8	14427.3	23973.3	31706.0	29177.6	25834.9	25140.5	23966.3
67.5°	2360.0	2436.1	2932.1	4514.6	9402.9	21098.9	36400.5	37145.6	32432.6	27851.1	23846.4
69°	2182.3	2207.7	2539.9	3490.3	6129.4	17407.8	35996.8	39551.7	35214.8	27862.7	22310.0
70°	2120.0	2147.7	2449.9	3215.8	5149.0	14263.5	34527.3	39270.3	35890.7	27244.4	20912.0
72.5°	1900.9	1937.8	2230.8	2890.5	4339.3	7352.1	27811.9	33611.5	32511.1	23811.8	16215.2
75°	1621.7	1684.0	2127.0	2869.8	4110.9	4673.8	18547.4	25041.3	24197.0	17029.5	9199.9
77.5°	671.3	678.2	929.7	2101.6	4313.9	4473.1	9968.1	15862.2	14042.1	7467.4	2770.6
80°	468.3	459.1	463.7	613.6	3481.1	4503.1	5114.4	8067.2	6270.1	1970.1	1296.5
82.5°	394.5	389.9	408.3	385.3	1178.8	5109.8	4277.0	4205.5	2952.8	1061.2	618.2
85°	260.7	253.8	334.5	350.6	560.6	4057.8	4599.9	3305.8	2200.8	567.5	263.0
87.5°	126.9	129.2	191.5	237.6	297.6	1284.9	4406.2	2613.7	1700.2	246.8	106.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	9179.1	9179.1	9179.1	9179.1	9179.1	9179.1	9179.1	9179.1	9179.1	9179.1	9179.1
2.5°	9031.5	8962.3	8900.0	8821.6	8761.6	8710.8	8641.6	8639.3	8627.8	8643.9	8648.5
5°	8830.8	8715.4	8540.1	8344.0	8205.6	8023.4	7845.7	7785.8	7718.9	7712.0	7732.7
7.5°	8528.6	8348.7	8048.8	7748.9	7449.0	7142.1	6851.5	6703.8	6560.8	6517.0	6537.7
10°	8191.8	7963.4	7504.3	7015.3	6593.1	6136.3	5693.4	5407.4	5146.7	5036.0	5063.6
12.5°	7928.8	7638.1	6992.2	6357.8	5725.7	5070.6	4486.9	3921.7	3494.9	3303.5	3315.0
15°	7702.7	7331.3	6512.4	5668.0	4876.8	3979.4	3169.7	2514.5	2140.8	2002.4	1997.8
17.5°	7458.2	7008.3	6011.8	5026.7	4000.2	2890.5	2122.3	1734.8	1587.1	1541.0	1541.0
20°	7197.5	6676.2	5488.1	4327.7	3077.4	2018.5	1596.4	1446.4	1391.1	1377.2	1374.9
22.5°	6955.3	6350.9	4962.1	3582.6	2226.2	1531.8	1358.8	1301.1	1291.9	1303.4	1303.4
25°	6763.8	6064.8	4429.2	2798.3	1619.4	1282.6	1208.8	1201.9	1236.5	1278.0	1284.9
27.5°	6620.8	5808.8	3903.3	2043.9	1273.4	1116.5	1091.2	1121.2	1201.9	1284.9	1301.1
30°	6521.6	5589.6	3273.5	1469.5	1061.2	978.1	989.7	1042.7	1165.0	1291.9	1326.5
32.5°	6477.8	5412.0	2639.1	1128.1	906.6	860.5	890.5	959.7	1086.5	1213.4	1255.0
35°	6519.3	5282.8	2053.1	936.6	793.6	759.0	793.6	865.1	948.1	1010.4	1035.8
37.5°	6669.2	5236.7	1545.6	830.5	719.8	685.1	712.8	761.3	798.2	821.3	832.8
40°	6985.3	5285.1	1211.1	775.1	678.2	639.0	645.9	669.0	694.4	712.8	715.1
42.5°	7488.2	5444.3	1077.3	754.4	652.9	602.1	590.6	606.7	634.4	659.8	664.4
45°	8157.2	5709.6	1063.5	761.3	641.3	572.1	549.0	565.2	602.1	643.6	650.5
47.5°	9022.3	6129.4	1128.1	798.2	648.2	556.0	521.4	537.5	586.0	641.3	650.5
50°	10046.5	6710.8	1248.0	853.6	680.5	556.0	509.8	523.7	574.4	636.7	645.9
52.5°	11253.0	7520.5	1372.6	908.9	726.7	576.7	514.4	512.1	558.3	615.9	627.5
55°	12584.1	8526.3	1492.6	957.4	752.0	604.4	526.0	498.3	535.2	581.3	590.6
57.5°	14150.5	9903.5	1702.5	1003.5	765.9	625.2	539.8	484.4	505.2	537.5	544.4
60°	16275.1	11926.6	2110.8	1081.9	791.3	634.4	542.1	470.6	468.3	491.4	493.7
62.5°	19045.7	14295.8	2500.7	1174.2	842.0	636.7	532.9	461.4	438.3	445.2	445.2
65°	21015.8	15167.8	2387.6	1252.6	888.2	634.4	523.7	454.5	415.2	403.7	403.7
67.5°	19894.7	13398.4	2027.8	1273.4	892.8	609.0	502.9	438.3	394.5	366.8	366.8
69°	18247.5	11744.4	1861.7	1236.5	855.9	579.0	479.8	422.2	380.6	348.3	348.3
70°	16904.9	10491.8	1760.2	1192.7	812.0	553.7	459.1	406.0	366.8	339.1	336.8
72.5°	12621.0	7001.4	1504.1	1028.9	666.7	468.3	401.4	362.2	329.9	311.4	311.4
75°	6660.0	3508.8	1231.9	839.7	514.4	373.7	329.9	304.5	286.1	283.7	281.4
77.5°	2182.3	1587.1	885.8	632.1	378.3	290.7	263.0	246.8	244.5	253.8	253.8
80°	1178.8	948.1	569.8	426.8	263.0	216.8	203.0	200.7	207.6	221.5	221.5
82.5°	572.1	468.3	339.1	263.0	179.9	159.2	159.2	161.5	170.7	186.9	186.9
85°	246.8	221.5	196.1	147.6	110.7	99.2	113.0	124.6	131.5	143.0	147.6
87.5°	117.7	103.8	90.0	57.7	48.4	50.8	60.0	73.8	87.7	96.9	99.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)